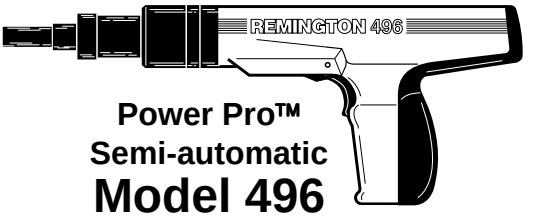
REMINGTON®

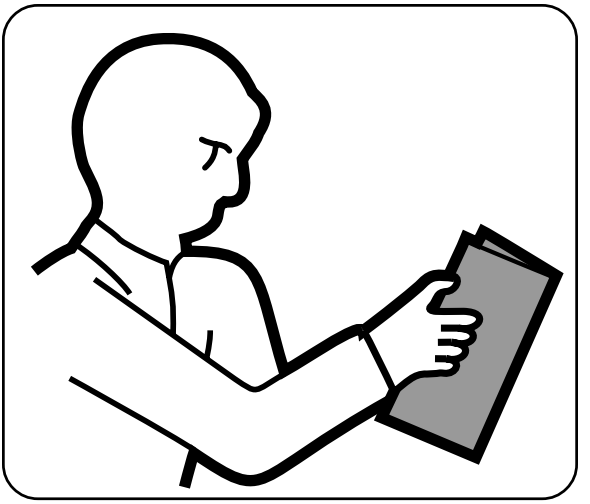


Power Pro™
Semi-automatic
Model 496

AN INDEPENDENT LABORATORY
UL®
TESTING FOR PUBLIC SAFETY

PATMI™
POWDER ACTUATED TOOL
MANUFACTURERS' INSTITUTE INC.

Operating Instructions



Important:
Read this manual and all labels carefully before operating your powder actuated tool. This manual should always accompany the tool and be transferred with it upon change of ownership.

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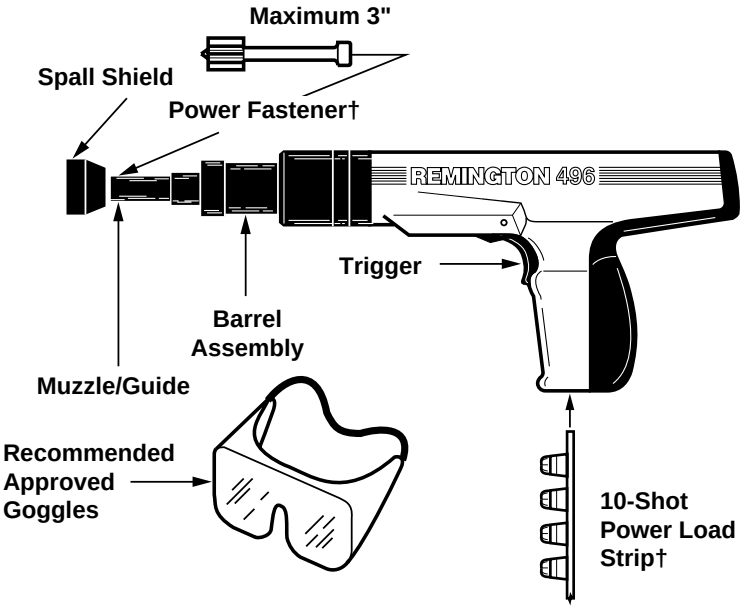
REMINGTON

Power Pro™ Semi-automatic Model 496

The Remington Power Pro™ Model 496 is designed for use with Remington 27 caliber power load strips and Remington power fasteners which are no longer than 3". Remington power fasteners are manufactured from special steel and heat treated to produce a very hard yet ductile fastener.



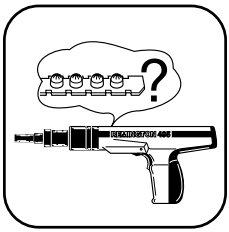
† Not supplied with tool

Warning: Safety Precautions

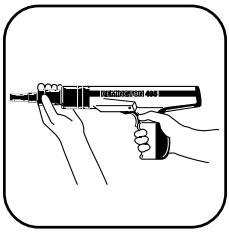
IMPORTANT: Read these operating instructions carefully and completely before trying to operate or service this tool. Improper use of this tool can cause serious injury or death from firing fastener into body or from flying debris. We expressly disclaim any liability for any injury to persons or damage to property which result from your failure to take the precautions contained in this manual.

WARNING: This tool is designed only for use by qualified operators. Qualification is obtained through a thorough understanding of the Safety Warnings and operating instructions as defined in this operating manual. **NOTE:** The labor regulations of many states require that the operator of this tool on a job site be thoroughly trained and certified for competence prior to operating this tool. For certification procedures, call: DESA Tool Division, 1-800-626-2237 (USA) or 1-905-826-8010 (Canada).

BEFORE USING



1. Always handle the tool as if it were loaded. Before starting work, check that the tool is unloaded and the muzzle is clear. Never load a tool unless it is going to be used.

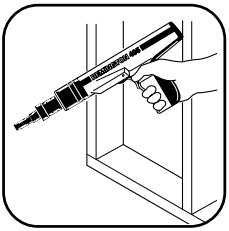


2. Always inspect to make sure the tool is working properly. If the tool does not work properly, remove from service and tag “DEFECTIVE.” Do not use the tool again until it has been properly repaired.

3. Operators and bystanders must **ALWAYS** wear goggles and ear protection which meet or exceed the accepted standards for adequate protection in your country. In the USA, refer to ANSI standards. In Canada, refer to CSA standards.

Safety Precautions

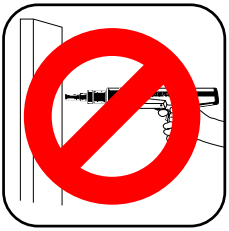
4. Always clear the work area on all sides and post appropriate warning signs on job sites.

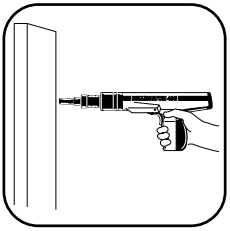


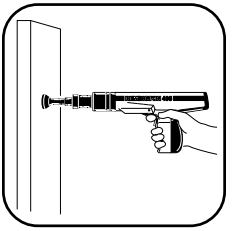
5. Make sure the work area is clean from loose material and debris.

HANDLING THE TOOL

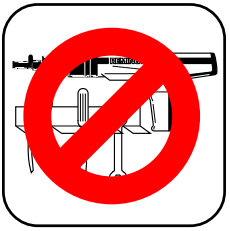
1. Never place your hand over the muzzle. Accidental discharge can cause serious injury.

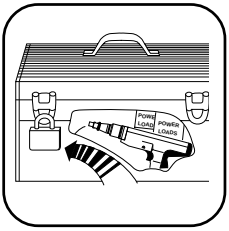




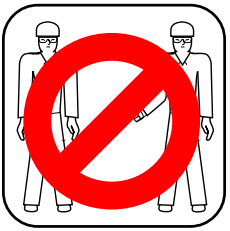


2. Never place your finger on the trigger until the tool's muzzle is against the work surface.



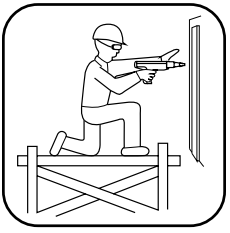


3. Store powder actuated tool and power load strips in a locked container. Unload tool before storing. Keep power loads of different power levels in separate containers.



4. Never carry or pass a loaded powder actuated tool. Never point a powder actuated tool at anyone.

5. If the tool is dropped, inspect for damage and repair it before continuing to work. Never use a damaged tool.

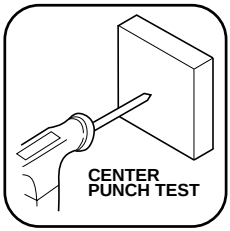


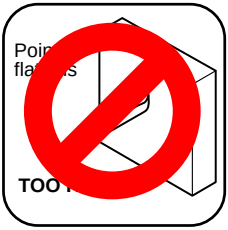
6. Always take precaution to maintain your balance while operating a powder actuated tool.

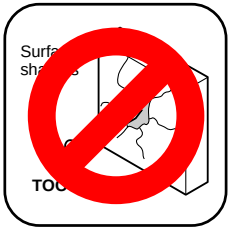
Safety Precautions

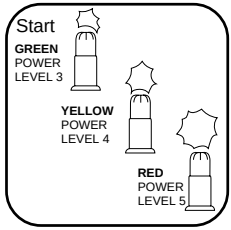
7. An operator taking medication should take extra precautions while handling the tool. Never drink alcoholic beverages or take medications which impair your vision, balance or judgement before using a powder actuated tool.

KNOW YOUR FASTENING BASE MATERIAL

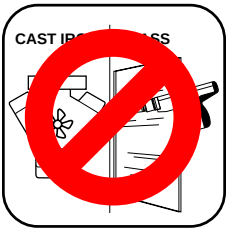


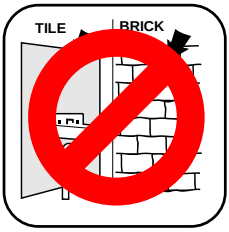




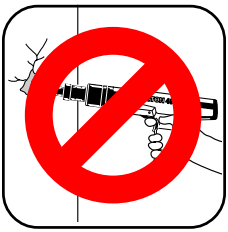


1. Always know the thickness and type of base material into which you are fastening. Never guess. Test the base material by using the Center Punch Test. The Center Punch Test is performed by using a hammer to test drive the particular power fastener to be used into the material. If the point penetrates easily, the material is too soft. If the point becomes blunt, the material is too hard. If the material fractures, cracks or shatters, the material is too brittle. Test fastenings can be made if the material shows a clear fastener impression and the fastener point is not blunted. Always start with the lowest power load (Green-Level 3) and proceeding with the order shown in the lower right-hand figure above. Operators and bystanders must always wear goggles and ear protection which meet or exceed the accepted standards for adequate protection in your country. In the USA, refer to ANSI standards. In Canada, refer to CSA standards.

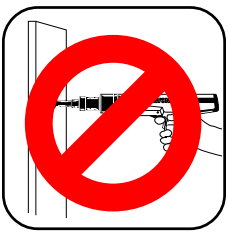




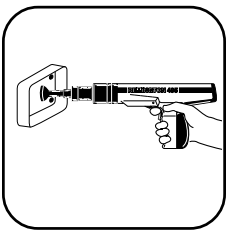
2. Never attempt to drive power fasteners into very hard or brittle materials including, but not limited to cast iron, glass, tile, stone, brick, or hardened steel. Materials of this type tend to shatter and create hazard from flying particles.

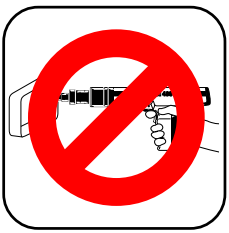


3. Never make fastenings in spalled or cracked areas.



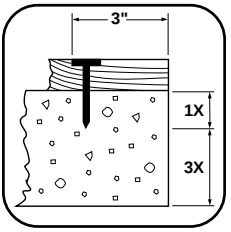
4. Never drive power fasteners into thin or easily penetrated materials unless it is backed by concrete or steel. When in doubt, such as when base material is concealed, conduct a Center Punch Test (See page 6). Check continually to avoid fastening into unsuitable material, especially in older buildings.

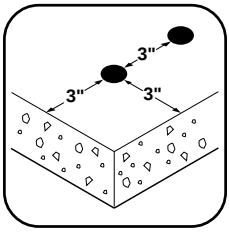




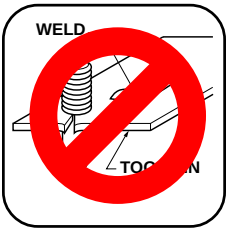
5. Do not fasten through or within 1/2" of predrilled or pre-punched holes.

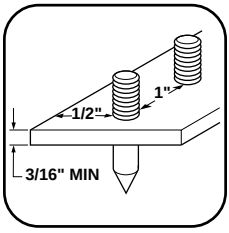
Safety Precautions



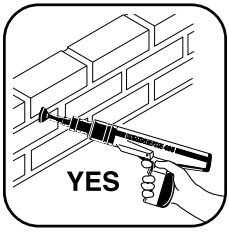


6. Do not drive power fasteners into concrete less than three times as thick as the intended fastener penetration, within 3" of the edge, within 3" of another power fastener or within 3" of a failed power fastener.



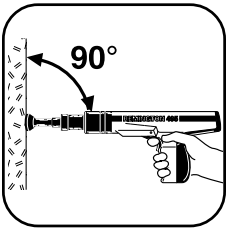


7. Do not drive power fasteners into steel base material less then 3/16" thick, within 2" of a weld, within 1/2" of the edge or within 1" of another power fastener.

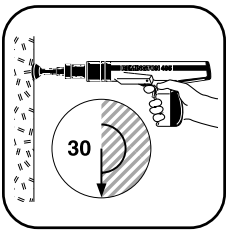


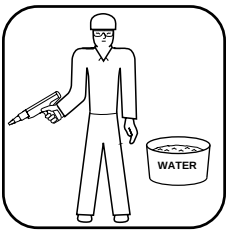
8. When fastening into masonry walls, always drive into horizontal mortar joints, never into vertical mortar joints. Be careful. A poorly laid joint may permit too much penetration, and/or unsatisfactory holding power.

OPERATING THE TOOL

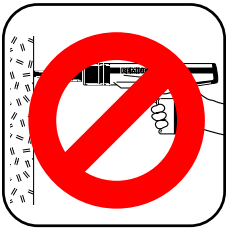


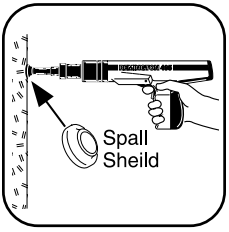
1. Always hold tool perpendicular to work surface.



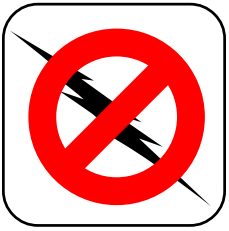


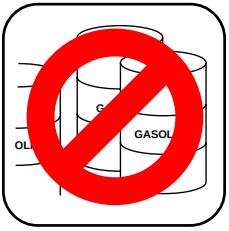
2. Should the tool fail to fire, hold the muzzle firmly against the work surface for 30 seconds. Release the trigger and remove pressure on the tool while holding the muzzle against the work surface. Again press the tool firmly against the work surface and pull the trigger. If the tool still fails to fire, hold the tool firmly against the work surface for another 30 seconds before advancing the power load strip. Use remaining loads in strip. Discard power load strip into water or oil.





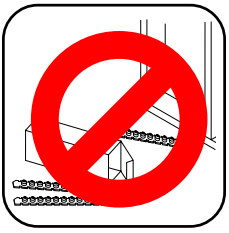
3. Always use the spall shield when driving directly into concrete or steel. Always wear goggles.

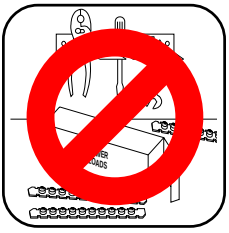




4. Never use a powder actuated tool in an explosive or flammable atmosphere or when non-sparking tools are required.

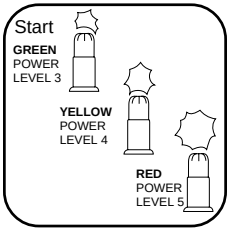
POWER LOADS AND FASTENERS

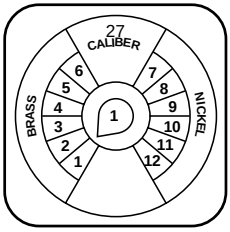




1. Never leave unfired power load strips on floors or work surfaces.

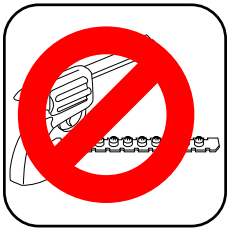
Safety Precautions

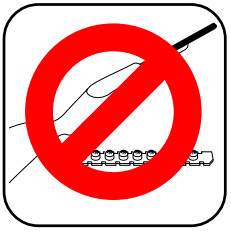




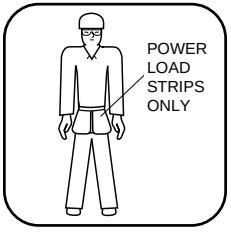
NOTE:
Failure to start with the lowest power level can result in overdrive condition and will result in damage to tool (See page 13).

2. Remington power load strips are available in three power levels – green (level 3), yellow (level 4) and red (level 5). Green is lowest power level, red is highest power level. Always start with the lowest power level (green-level 3) and increase until a proper fastening is made (See page 13 *Selecting Power Fasteners and Power Loads*). ***IMPORTANT:*** **Purple (level 6) power load strips will not function in model 496 tool.**

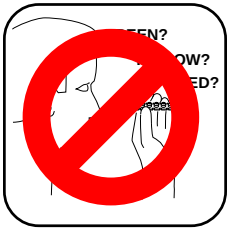




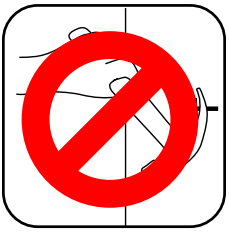
3. Never use power loads in firearms.



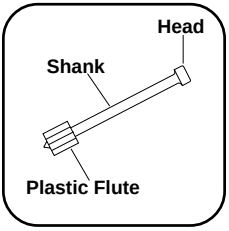
4. Never carry fasteners or other hard objects in the same pocket or container with power load strips.



5. A color blind person must take extra precautions to prevent the chance of mixing the power load strips of various levels.

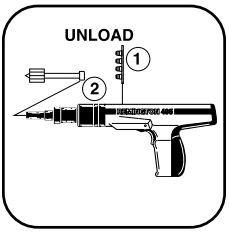


6. Power fasteners are a permanently installed fixture. An act of demolition is required for their removal. Appropriate safety precautions must be taken.



7. Never use common nails or other materials as fasteners. Remington Power Fasteners are manufactured from special steel and heat treated to produce a very hard yet ductile fastener.

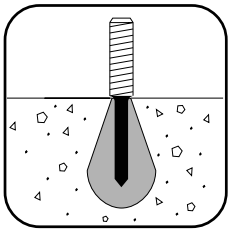
8. Never pry a power load out of the strip. Prying can discharge the load causing serious injury (See *Troubleshooting Guide*, page 24). Never attempt to reload used strips.



9. If work is interrupted for any reason, remove the power load strip before removing the power fastener.

Why A Power Fastener Holds

WHY A POWER FASTENER HOLDS IN CONCRETE

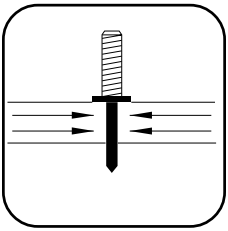


The compression bond of the concrete to the power fastener accounts for the majority of the holding power. The fastener displaces the concrete which tries to return to its original form causing a squeezing effect.

Maximum holding power is achieved when the depth of penetration produces a bond on the power fastener equal to the strength of the concrete. As a general rule, penetration should be approximately 1" to 1 1/4" into the base concrete. Make sure the concrete is at least three times as thick as the intended fastener penetration. Never have the power fastener point protrude through the concrete.

NOTE: Concrete needs to cure for 28 days before maximum fastening holding power will be achieved.

WHY A POWER FASTENER HOLDS IN STEEL



Holding power in steel depends on the elasticity of the steel. The steel pushes back on the shank of the power fastener.

Drop a marble into water; the water parts, the marble continues down, the water closes back. This is similar to the reaction when a power fastener penetrates steel.

In steel, the point of the power fastener must penetrate completely through for highest holding power. If the fastener does not penetrate, the spring action of the steel pushes back on the point and tends to force the fastener out.

Recommended applications are between 3/16-3/8" steel.

NOTE: When fastening in steel be sure the point goes through the steel.

Selecting Power Fasteners and Power loads

FASTENING INTO CONCRETE

The proper power fastener length can be determined by adding the thickness of the material to be fastened and the amount of fastener that will actually penetrate the concrete. The concrete must be three times as thick as the intended fastener penetration. In most cases, penetration should be approximately 1" to 1 1/4" into the base concrete material.

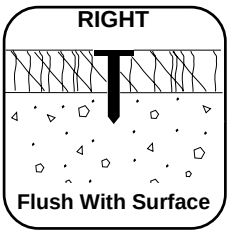
FASTENING INTO STEEL

The proper fastener length can be determined by adding the thickness of the material to be fastened and the thickness of the steel. The point of the power fastener must go completely through the steel.

POWER LOADS

Always start with the lowest power level (green-level 3). If the first test fastener does not penetrate to the desired depth, move to the next highest power level (yellow-level 4). Increase until a proper fastening is made.

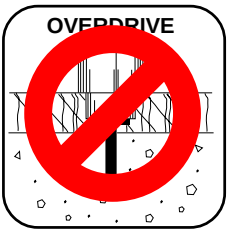
IMPORTANT: Damage to the tool will result if the above instructions are not followed (see illustrations to right and lower right).



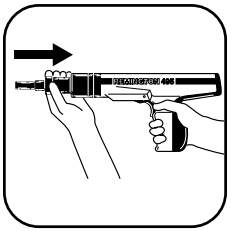
OVERDRIVEN POWER FASTENERS AND PISTON

An overdriven power fastener results when too strong of a power load is used causing the piston to extend past the muzzle. Move to the next lightest power load. Repeated overdrive will damage your tool. By avoiding overdrive, you can extend the life of your tool considerably and avoid costly repairs.

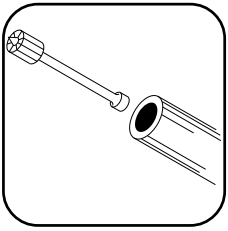
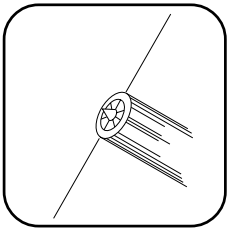
NOTE: Never fire the tool without a power fastener. This can damage the tool and/or cause possible injury to the operator.



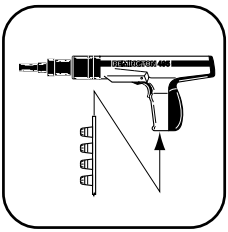
Operation



1. Grasp barrel assembly and slide forward rapidly until it stops. Push barrel assembly back into tool to the closed position. This sets piston into firing position.

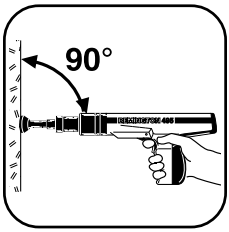



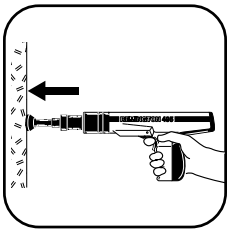
2. Insert power fastener into muzzle of tool, head end first. Push the fastener until point is even with end of tool.



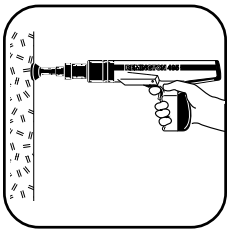
NOTE:
Failure to start with the lowest power level can result in overdrive condition and will result in damage to tool
(See page 13).

3. Select the proper power level of power load strips. Always insert power load strips through bottom of handle. Push power load strip in until even with bottom of handle.

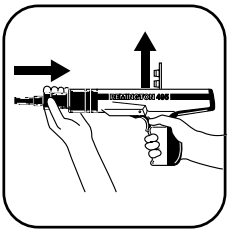




4. Place the muzzle of tool perpendicular to work surface without tilting the tool. Push tool against work surface until sliding action of barrel stops.

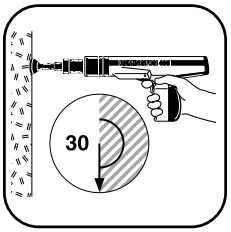


5. Squeeze trigger to set power fastener. Be sure to keep pressure on tool during this operation.



6. Grasp muzzle cap and slide barrel forward rapidly until it stops. Push barrel assembly back into tool to the closed position. This advances the power load strip and resets the piston for the next fastening.

WARNING: Do not depress barrel assembly past the closed position when loading new power fastener. Live power load is in firing position.

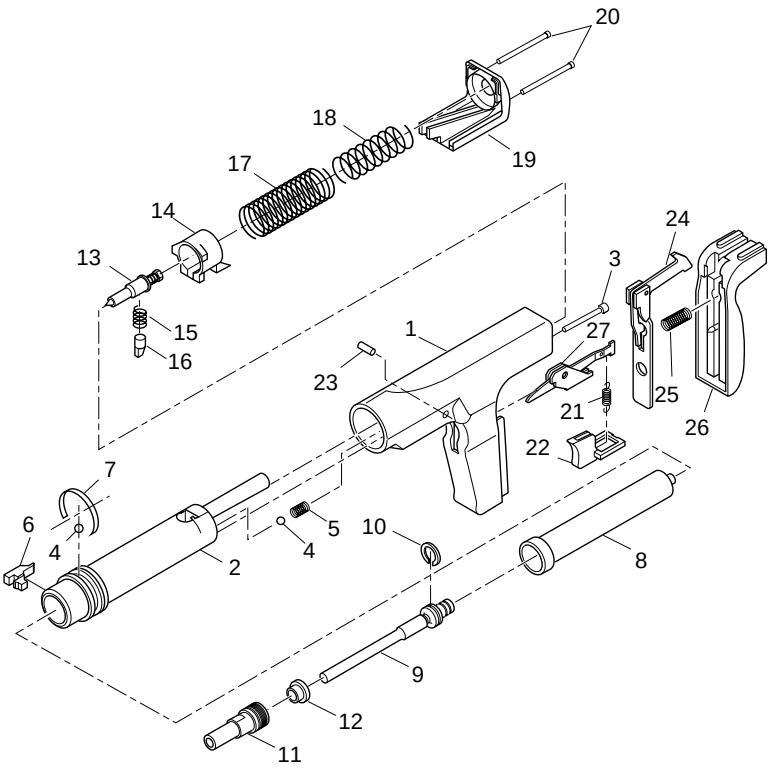


7. Should the tool fail to fire, hold the muzzle firmly against the work surface for 30 seconds. Release the trigger and remove pressure on the tool while holding the muzzle against the work surface. Again press the tool firmly against the work surface and pull the trigger. If the tool still fails to fire, hold the tool firmly against the work surface for another 30 seconds before advancing the power load strip. Use remaining loads in strip. Discard power load strip into water or oil.

Parts List 496

Key No.	Part No.	Description	Qty.
1	502001	Housing	1
2	502100	Outer Liner Assembly	1
3	501104	Push Pin	1
4	301013	Ball Setter	2
5	501106	Spring Ball Set	1
6	501107	Key Stop	1
7	301014	Annular Spring	1
8	502200	Barrel	1
9	502202	Piston Assembly (Includes Ring)	1
10	501212	Ring	1
11	502215	3" Muzzle Cap	1
12	TA4086	Plastic Buffer (5 pack)	
13	501300	Firing Pin Assembly (Includes Pin, Spring, Nut, Washer)	1
14	501317	Firing Pin Guide	1
15	301047	Spring	1
16	501319	Sear	1
17	501320	Spring	1
18	501321	Safety Spring	1
19	501422	Rear Pad	1
20	501423	Bolt	2
21	301531	Advance Spring	1
22	301533	Trigger	1
23	501526	Trigger Pin	1
24	502600	Rocker Arm Assembly (Includes Rocker Arm, Rocker Arm Pin and Rocker Arm Holder)	1
25	501733	Rocker Arm Spring	1
26	501700	Handle Pad Assembly	1
27	501500	Advance Assembly (Holder, Bar, Tube)	1
		Optional Accessory	
	101320-02	Spall Shield	1
	056486	Brush	1

IMPORTANT: Do not use key numbers when ordering service parts. Always order components by part number and description. Include model number and serial number of tool.



Cleaning and Maintenance

Clean tool after each days use. Disassemble and clean the barrel assembly with the wire brush provided with tool. **Notice:** Do not attempt to clean power load strip channel with wire brush.

Apply good quality penetrating lubricant spray (such as WD-40) sparingly and wipe dry.

Tool Disassembly

WARNING: Always unload a powder actuated tool before disassembling, replacing barrel, cleaning, or assembling.

A. REMOVING BARREL ASSEMBLY

1. Using screwdriver, lift end of annular spring and rotate spring until stop is uncovered (see Figure 1).

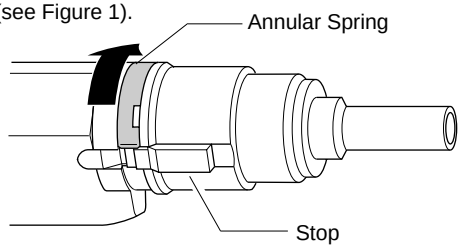


Figure 1 - Rotating Annular Spring to Uncover Stop

2. Push stop towards rear of tool and remove (see Figure 2).

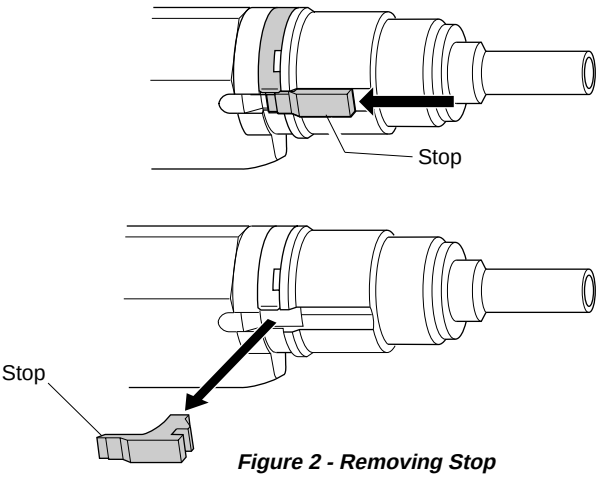


Figure 2 - Removing Stop

3. Pull barrel assembly out of housing.
4. Unscrew muzzle cap.
5. Pull buffer out of muzzle cap (see Figure 3).

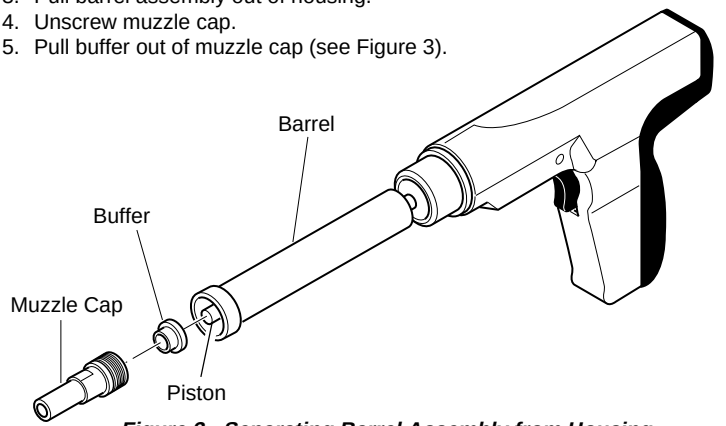


Figure 3 - Separating Barrel Assembly from Housing

6. Remove piston assembly from barrel (see Figure 4).

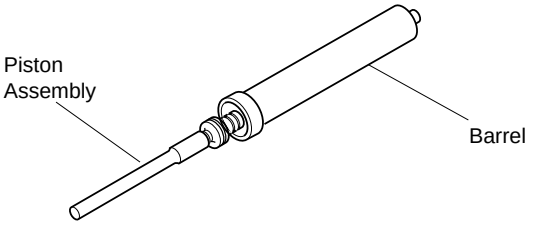


Figure 4 - Removing Piston Assembly from Barrel

B. REMOVING REAR PAD AND HANDLE PAD ASSEMBLY

1. Loosen screws on back of handle pad assembly and rear pad with 3mm Allen wrench.
2. Remove assembly handle pad and rear pad. Do not remove the screw from the assembly handle pad (see Figure 5).

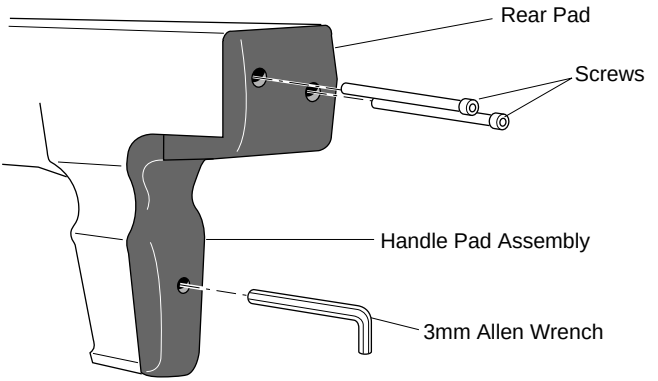


Figure 5 - Removing Handle Pad Assembly and Rear Pad

C. REMOVING ROCKER ARM ASSEMBLY

1. Rocker arm assembly is located in housing. Pull rocker arm assembly out of housing (see Figure 6).
2. Pull rocker arm spring away from handle pad assembly to remove (see Figure 7).

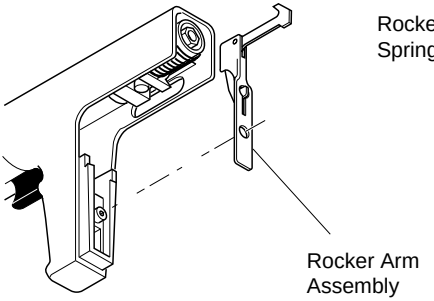


Figure 6 - Removing Rocker Arm Assembly from Housing

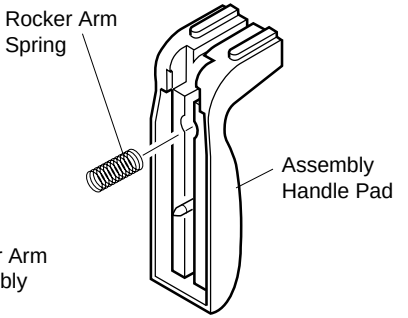


Figure 7 - Removing Rocker Arm Spring from Handle Pad

D. REMOVING FIRING PIN

1. Remove two springs from outer liner assembly (see Figure 8).
2. Push in sear and pull out firing pin guide (see Figure 8). Line up sear with end of slot. Remove spring and sear. Remove firing pin assembly. Remove push pin (see Figure 9).

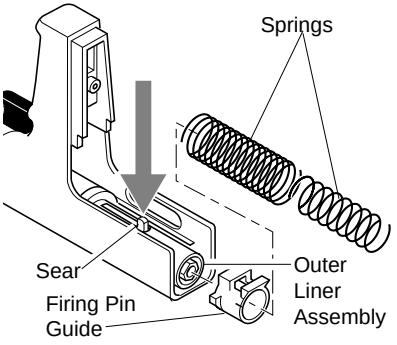


Figure 8 - Removing Springs and Pushing in Sear to Remove Firing Pin Guide

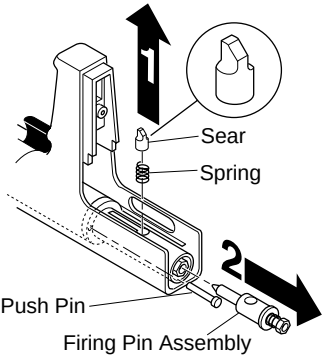


Figure 9 - Removing Sear, Spring, Firing Pin Assembly, and Push Pin

E. REMOVING TRIGGER ASSEMBLY

1. Remove trigger pin from housing with hammer and punch (see Figure 10).
2. Remove trigger assembly from rear of housing.

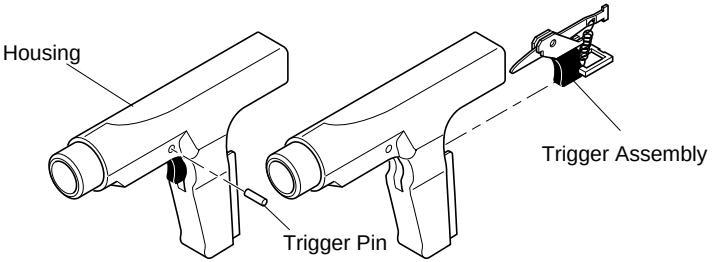


Figure 10 - Removing Trigger Pin and Trigger Assembly

F. REMOVING OUTER LINER ASSEMBLY FROM HOUSING

1. Grasp outer liner assembly and remove from housing.
2. Remove spring and ball bearing located at rear of liner.

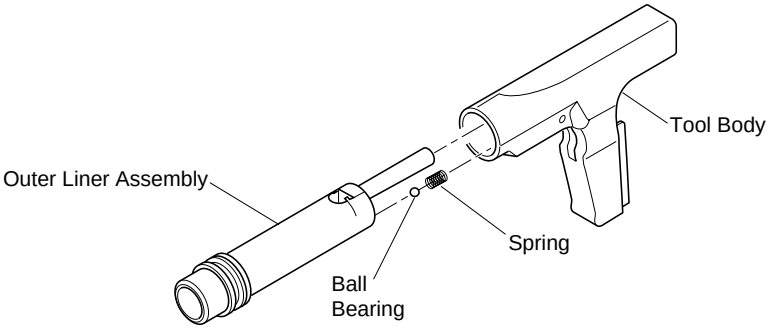


Figure 11 - Removing Outer Liner Assembly from Housing

WARNING: Always unload a powder actuated tool before disassembling, replacing barrel, cleaning, or assembling.

A. INSERTING OUTER LINER ASSEMBLY INTO HOUSING

1. Place ball bearing and spring in end of outer liner assembly (see Figure 11, page 20).
2. Slide outer liner assembly into tool body.

B. ATTACHING TRIGGER ASSEMBLY TO HOUSING

1. Insert trigger assembly into tool body at rear of housing (see Figure 10, page 20).
2. Secure trigger pin by inserting trigger pin through housing and trigger assembly (see Figure 10, page 20) .

C. ATTACHING FIRING PIN ASSEMBLY

1. Insert push pin into hole in housing next to outer liner assembly (see Figure 12).
2. Insert firing pin assembly in outer liner assembly.
3. Insert spring and sear through slot on outer liner assembly and into slot in firing pin assembly (see Figure 12).
4. Slide firing pin guide on outer liner assembly (see Figure 13).
5. Slide springs on outer liner assembly (see Figure 13).

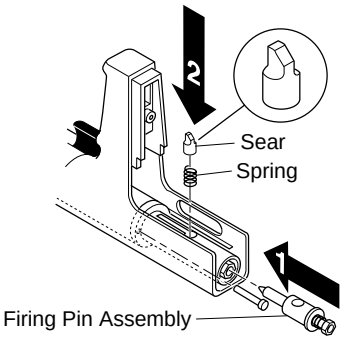


Figure 12 - Inserting Firing Pin Assembly, Spring, Sear, and Push Pin

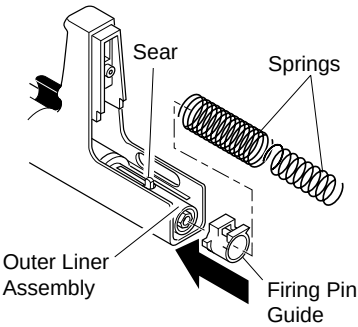


Figure 13 - Inserting Firing Pin Guide and Springs

D. REPLACING ROCKER ARM ASSEMBLY

1. Insert rocker arm spring in recess on assembly handle pad (see Figure 14).
2. Put rocker arm assembly inside of the housing. Line up screw hole in housing with hole in rocker arm assembly (see Figure 15).

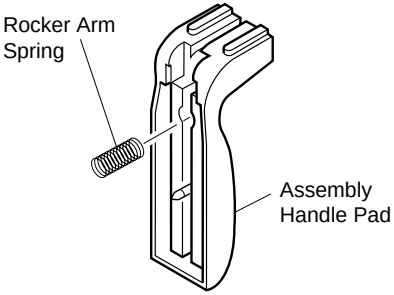


Figure 14 - Replacing Rocker Arm Spring into Handle Pad

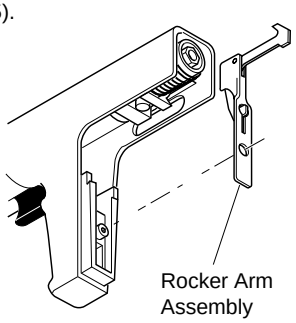


Figure 15 - Replacing Rocker Arm Assembly into Housing

Continued

E. ATTACHING REAR PAD AND HANDLE PAD ASSEMBLY

1. Replace the handle pad assembly. Tighten screw with 3mm Allen wrench.
2. Replace the rear pad with two screws provided. The screws will also secure the outer liner replaced in step A. *Inserting Outer Liner Assembly into Housing* (see Figure 16).

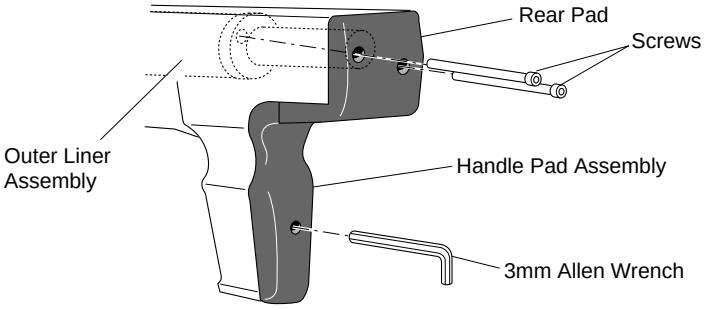


Figure 16 - Replacing Handle Pad Assembly and Rear Pad

F. ASSEMBLING BARREL ASSEMBLY

1. Insert piston assembly into barrel (see Figure 17).

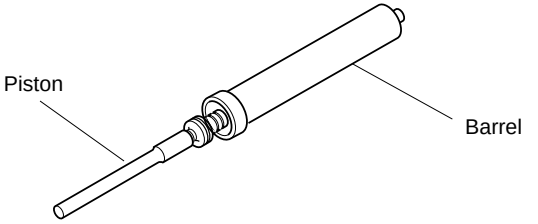


Figure 17 - Inserting Piston in Barrel

2. Insert buffer in muzzle cap.
3. Screw muzzle cap to barrel assembly.
4. Insert barrel into outer liner assembly (see Figure 18).

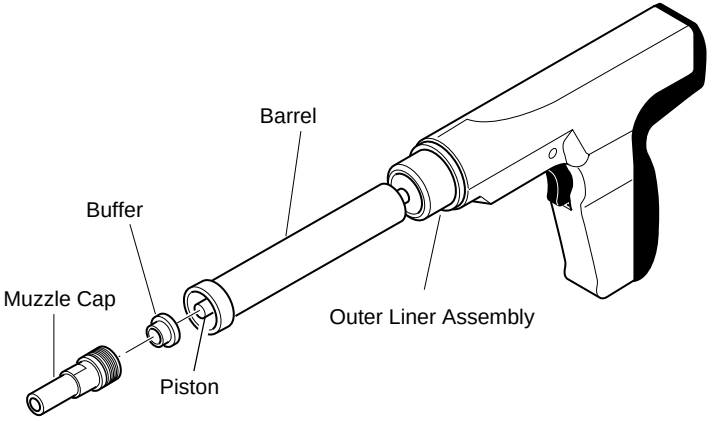


Figure 18 - Inserting Barrel Assembly into Outer Liner Assembly

5. Insert stop into slot on outer liner assembly (see Figure 19).

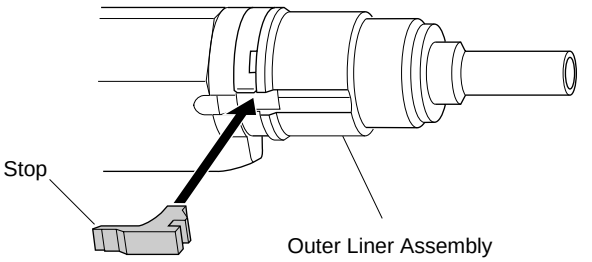


Figure 19 - Replacing Stop

6. Push stop towards front of tool (see Figure 20).

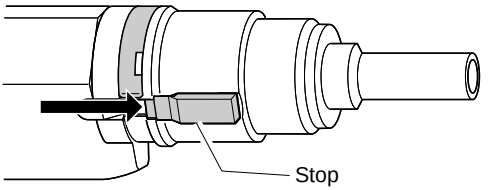


Figure 20 - Pushing Stop towards Front of Tool

7. Rotate annular spring until stop is covered (see Figure 21).

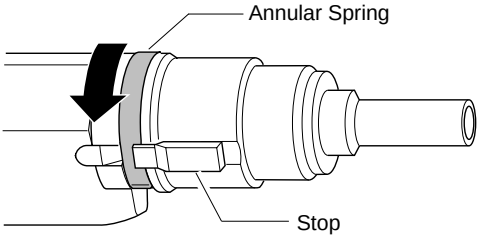


Figure 21 - Rotating Annular Spring to Secure Stop

Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	REMEDY
Piston hangs out of muzzle.	Tool overdriven.	Tap piston on hard surface until piston is pushed back into the guide. (See *Overdriven Fastener* below)
	Piston not properly assembled in relation to stop.	Remove barrel assembly (see pages 18-20). Replace all damaged or missing parts.
	Broken piston or piston ring.	Replace piston or piston ring or take tool to your distributor.
Overdriven fastener.	Excessive power.	Change either to next lower power load or next longer length fastener.
Piston jammed.	Overdriving of fastener (see above).	Remove barrel assembly (see pages 18-20). Replace other parts if damaged.
Power load strip will not advance.	Advance bar or spring damaged	Replace advance bar or springs.
	Tool dirty.	Clean tool. **Notice:** Do not attempt to clean power load strip channel with wire brush. You may damage tool.
Reduction or loss of power.	Piston not returning to full rear position.	Barrel must be opened to the full extended position to properly position piston.
	Worn piston ring or broken piston.	Replace piston and/or piston ring or take tool to your distributor.
Tool does not completely depress.	Misassembled or damaged sear, firing pin parts, or guide.	Remove firing pin guide and check all parts for correct fit assembly.
Tool does not fire.	Failure of tool to depress completely.	See data listed under *Tool does not completely depress,* above.
	Piston not fully reset.	Fully reset piston. See step 1 under *Operation*, page 14.
	Dirt buildup on sear not allowing proper penetration of firing pin or worn firing pin.	Check firing pin mark on power load. Clean firing pin guide, sear and firing pin. Replace worn or damaged parts. **Notice:** Do not attempt to clean power load strip channel with wire brush. You may damage tool.
Opening and closing of barrel or pushing down on tool, etc. is not smooth but is rough or binds.	Lack of proper cleaning.	Inspect and clean complete tool. Replace worn or damaged parts. **Notice:** Do not attempt to clean power load strip channel with wire brush. You may damage tool.

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Parts Centrals

Contact authorized dealers of this product. If they can't supply original replacement part(s), either contact your nearest Parts Central (see below) or call DESA International's Parts Department at 1-800-972-7879for information.

When calling DESA International, have ready

- model number of your tool
- replacement part number

BALTIMORE ELECTRIC
1348 Dixwell Avenue
Hamden, CT 06514-0322
1-800-397-7553
203-248-7553
Parts Department

***ALL TOOL & FASTENER**
7830 N.W. 72nd Avenue
Miami, FL 33166
305-888-6909
Parts Department

***PRECISION TOOL**
431 Commerce Park Drive
Suite 106
Marietta, GA 30060-2746
770-421-0688
Bob Young

***PORTABLE HEATER PARTS**
342 No. County Road 400 E.
Valparaiso, IN 46383-9704
219-462-7441
1-800-362-6951

***F B D**
1349 Adams Street
Bowling Green, KY
42103-3414
270-846-1199
1-800-654-8534

ROBI TOOL SALES
160 Broadway
Somerville, MA 02145-0002
617-776-1234

FOUR FLAGS POWER PRODUCTS
1115 Stateline Road
Niles, MI 49120-4728
616-684-2697
Parts Department
1-800-268-4983

MASTER PARTS DIST.
1184 Wilson Ave. NW
Grand Rapids, MI
49544-3458
US 1-800-446-1446
616-791-0505
Mike Fowler

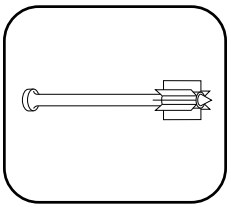
MANZO ASSOCIATES
1645 Bustleton Pike
Feasterville, PA 19053-7305
215-364-0480
Parts Department

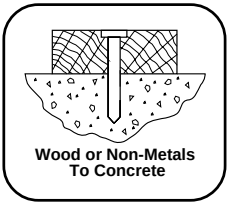
21st CENTURY
2950 Fretz Valley Road
Perkasie, PA 18944-4034
215-795-0400
1-800-325-4828
Parts Department

BLUEBONNET TOOL
10490 Shady Trail
Suite 104
Dallas, TX 75354-1145
214-358-2363
Ken Perry

*Certified For Service

Fasteners

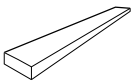




SP FASTENERS Fasten wood or nonmetals to concrete or steel.

Application Chart

Power load and power fastener application information.

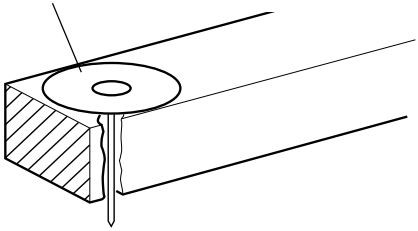
For fastening this	to this	power fastener length	power load color
Two by Fours 	Concrete Cement Block Steel (3/16" to 3/8" Thick)	2 1/2" 2 1/2" 2"	Yellow Yellow Yellow/Red
Furring Strips	Concrete Cement Block Steel (3/16" to 3/8" Thick)	1 1/2" 1 1/2" 1 1/2"	Yellow Yellow Yellow/Red
Electrical Junction Boxes	Concrete Cement Block Steel (3/16" to 3/8" Thick)	1" 1" 1"	Yellow Green Yellow/Red
Conduit Clips	Concrete Cement Block Steel (3/16" to 3/8" Thick)	1" 1" 1"	Yellow Green Yellow/Red
Shelf Brackets	Concrete Cement Block	1" 1"	Yellow Green
1/4" Plywood or Pegboard	Concrete Cement Block Steel (3/16" to 3/8" Thick)	1 1/4" 1 1/4" 1 1/4"	Yellow Yellow Yellow/Red

Power load listings are recommendations only. If you are in doubt, try a test fastening using the next lightest power load.

IMPORTANT

- Recommended for use with Remington power load strips and power fasteners.
- If power fastener goes below the top surface of the board, use penetrating control disc (* see illustration below).
- Always wear approved eye and ear protection.

* *Use power fastener with penetration control disc, part number 015549.*



27 CALIBER strip loads for powder actuated tools	Load Level Number	Load Strength	Color Code: Case Body	Color Code: Head
	3	medium	brass	Green
	4	heavy	brass	Yellow
	5	extra heavy	brass	Red

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Maintenance Log

Date	Maintenance Performed

Limited Warranty Agreement

DESA International warrants the Remington Power Pro™ Model 496 against defects in materials and workmanship for a period of one (1) year from the date of purchase.

If within one (1) year from the purchase date this Powder Actuated Tool fails due to a defect in material or workmanship, DESA will send replacement part(s) or replace the tool at DESA's option. To obtain service under this warranty, contact DESA at the number/address listed below. You must have the Serial Number, Model Number, date of purchase, and indicate the type of problem being experienced. DESA will send replacement part(s) or replace the tool at DESA's option. However, this warranty does not cover failures caused by misusing or abusing the product (for proper use of this product, read and understand the operating instructions in this owner's manual). Repairs made because of misuse, abuse, negligence, or accident will be charged for at regular repair prices.

This expressed and limited warranty is the only warranty on this product, and to the full extent permitted by law. There are no other warranties, expressed or implied, including warranties of merchantability and/or fitness for a particular purpose which extend beyond the terms of this expressed and limited warranty.

To the full extent permitted by law, the liability of DESA for personal injury, property damage, or any other damage whatsoever, including consequential and incidental damages, arising from the sale or use of this product shall not exceed the purchase price of this product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For information about this warranty write:

DESA
INTERNATIONAL
2701 Industrial Drive
P.O. Box 90004
Bowling Green, KY 42102-9004

U.S.A. ONLY

For Technical Assistance or Repair on Your Remington Powder Actuated Tool, Call Technical Services Department

1-800-858-8501, ext. 7660

You can also visit DESA International's Technical Service web site at **www.desatech.com**.

For Certification Procedures,
Call 1-800-858-8501, ext. 7690

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